

I claim:

- 1.** An apparatus comprising:
a plurality of optical fibers, wherein:
 said optical fibers each having a first end and a second end;
 said fibers are capable of transmitting infrared radiation ("IR");
a sensor for sensing IR, wherein said sensor is in IR-sensing contact with said first end of each of said optical fibers;
a separator, wherein said separator engages said plurality of fibers and is suitable for spatially separating said optical fibers in a pattern that enables said optical fibers to engage individual samples on a sample plate.
- 2.** The apparatus of claim 1 further comprising a collar for bundling said optical fibers.
- 3.** The apparatus of claim 1 wherein said second end of said optical fibers are physically adapted to receive a first chemical entity.
- 4.** The apparatus of claim 3 wherein said individual samples comprise said first chemical entity.
- 5.** The apparatus of claim 1 further comprising a surface having a binding compound disposed thereon.
- 6.** The apparatus of claim 1 wherein said first end of said optical fibers are physically coupled to said sensor.
- 7.** The apparatus of claim 1 wherein said separator is engaged to said plurality of fibers such that it can slide along said plurality of fibers.
- 8.** A method comprising:
 engaging a chemical entity to a first end of an IR-transmitting fiber;
 bringing said chemical entity in contact with a binding compound; and
 conducting a thermal signal resulting from a binding interaction to a thermal sensor through said IR-transmitting fiber, wherein said binding interaction occurs between said chemical entity and said binding compound.

9. The method of claim 8 further comprising sliding a separator along said IR-transmitting fiber.

10. The method of claim 8 wherein engaging a chemical entity further comprises inserting said first end of said IR-transmitting fiber into a sample carrier.

11. The method of claim 8 wherein bringing said chemical entity in contact with a binding compound further comprises inserting said first end of said IR-transmitting fiber into a well after engaging said chemical entity.

12. A method comprising:
positioning a separator along a plurality of IR-transmitting fibers to obtain a desired spacing between said adjacent fibers at one end thereof; and
conducting a thermal signal through said IR-transmitting fiber.

13. The method of claim 12 further comprising engaging a chemical entity to said one end of said IR-transmitting fibers.

14. The method of claim 13 further comprising bringing said chemical entity into contact with a binding compound.

15. The method of claim 12 wherein conducting a thermal signal further comprises conducting said thermal signal to a thermal sensor.